Panoche Energy Center, LLC

July 27, 2007

James W. Reede, Jr., Ed.D
Energy Facility Siting Project Manager
California Energy Commission
1516 9th Street
Sacramento, CA 95814

Re: Panoche Water Supply Alternatives

Dear Dr. Reede:

Panoche Energy Center, LLC ("Panoche") has previously provided to CEC staff via several technical memorandums[1] a discussion of the environmental and economic impacts of using (1) wastewater effluent from the City of Mendota and (2) using semi-confined aquifer water for process water. The economic impacts as discussed in those memos and herein are of such magnitude that if the Panoche project is required to incur such costs, the project will be cancelled. In addition to the environmental and economic considerations, the two alternatives are not practical from either a schedule or technical standpoint.

Economic Impact

After Tuesday's workshop, we requested that Bibb and Associates prepare a refined and updated review of all additional costs associated with the CEC proposed alternatives. That information is summarized as follows:

Item	Cost Estimate
18 mile water pipeline to Mendota	$18 million capital cost
Softening system for semi-confined aquifer	$12 million capital cost
Additional injection well	$1.5 million capital cost
Larger RO system to treat additional water	$6 million capital cost
Contracted EPC and TG cost	$263 million capital cost
% Increase in capital costs	14.3%
Additional O&M costs for Mendota water treatment (Title 22)	Unknown
Additional O&M costs for softening	$2.14 million annually
Additional O&M costs for larger RO system	Unknown
Current projected annual O&M costs	$16.6 million annually
% Increase in annual O&M costs	>12.9%

[1] The following technical memos have been provided by Panoche to CEC staff:
March 2, 2007 – Expanded Evaluation of Water Supply and Wastewater Discharge Alternatives
March 23, 2007 – Supplemental Discussion of Water Supply and Wastewater Discharge Alternatives
April 24, 2007 – Water Quality Evaluation
July 20, 2007 – Response to "Alternative Water Supply" and "Dry Cooling"

Since the wastewater effluent from Mendota is insufficient to supply the needs of Panoche, Panoche would be required to acquire additional supply water from the semi-confined aquifer as proposed by CEC staff. In addition to the cost to use Mendota water and semi-confined aquifer water, there are significant schedule and project uncertainty issues as described below. The economic impacts have to take into account the combined effect of both alternatives.

Practical and schedule impacts of using Mendota wastewater effluent:

1. Effluent from Mendota cannot provide even half of the amount of water that is required when running at continuous full load.
2. Panoche's water demand will be on an hourly basis (not daily or annually) with the maximum demand expected to occur frequently during hot periods but potentially for short periods of time. Much (if not most) of the time Panoche will not be able to take effluent from Mendota as Panoche will not be running.
3. Operations of Panoche cannot be subject to wastewater availability from Mendota at any moment in time or long term.
4. Constructing a water line would require a crossing of the Southern Pacific railroad track which typically requires a minimum of two years to obtain approval from the railroad.
5. Constructing a water line would require crossing of the California aqueduct.
6. It is not possible to determine or analyze at this time other technical, schedule, or environmental impacts related to route selection, environmental surveys, right-of-way acquisition, and other unknown impacts.

Practical and schedule impacts for using semi-confined aquifer water:

1. This water would have to be softened for cooling tower use (not required for confined aquifer water) and would result in RO treatment of more than three times as much water.
2. Lime and soda ash softening systems are designed for continuous operation and are incompatible with a peaking plant that will require frequent and fast start-up.
3. Five additional people would be required to operate the softening system on a continuous basis.
4. RO reject would increase overall raw water consumption by 11%.
5. The wastewater injection amount would increase by 44% thus requiring at least one additional injection well and associated capital and operating costs.
6. Plant layout would have to be redesigned and additional land acquired for water treatment resulting in significant schedule delays, additional environmental impacts and Williamson Act cancellation.
7. The additional RO equipment will increase auxiliary power usage by an estimated 600 kW significantly impacting Panoche's ability to meet its contracted delivery amount.

Project Schedule

Changes to the Panoche water plan as proposed by staff will result in significant delays due to additional land acquisition and consequent environmental review, revised air modeling and permitting due to revised plant layout and lime and soda ash dust, cancellation of additional land under the Williamson Act, and additional biological mitigation.

1. The above revisions would require many months to complete.
2. Panoche has entered into a fixed price EPC contract that requires Notice to Proceed 18 months prior to the in-service date. Beginning on February 1, 2008 the fixed EPC contract price escalates at $51,200 per day in addition to day for day extension of the in-service date. After February 15, 2008 the fixed price is subject to renegotiation and the contract subject to cancellation.
3. The PPA required in-service date is August 1, 2009.
4. Panoche cannot sustain any more delays in schedule and meet its required in-service date.

Confined Water Mitigation Plan

Panoche has previously over a several month period discussed a water enhancement or mitigation program with CEC staff with various vague responses from staff. Specifically, Panoche has been working with Westlands Water District to provide a one time contribution for its loan program to farmers for installation of water conservation measures including drip irrigations systems, aluminum piping, etc. Westlands has expressed a strong interest to enter into an agreement for such contribution. Panoche is willing to enter into a contribution program that would provide a 1 for 1 offset of water used by Panoche from the confined aquifer based on the following conditions:

1. Estimated acre feet of water saved per year per $500,000 loan – 209 acre feet (per Westlands)
2. Impact of contribution is compounded every four years as a result of repayment of loans and new loans made for additional conservation systems
3. Average life cycle of conservation systems installed is a minimum of 8 years (per Westlands)
4. Discount of the value of confined aquifer water at a ratio of 3 to 1 since it is approximately three times higher in TDS than surface water that it is conserving
5. Panoche water usage is actually expected to be much less on an annual basis due to anticipated operations of much less than 5000 hours per year, however the model uses 5000 hours for comparison purposes
6. Based on these assumptions the water savings over the 20 year life plus the construction period of Panoche exceeds the maximum water usage
7. The draft Memorandum of Understanding that we provided to Westlands Water District is attached along with a spreadsheet reflecting the long term water savings from the mitigation plan is attached.

Summary

Panoche Energy Center, LLC has extensively reviewed the water supply alternatives proposed by CEC staff with its engineering firm and environmental consultants and has concluded that such alternatives are impractical, environmentally undesirable and economically unsound. The enormous cost impacts and schedule delays occasioned by staff's proposal will result in cancellation of the Panoche Energy Center project. To date Panoche has incurred costs in excess of $16 million for the development, permitting, and design of the project and continues to incur expenses and liabilities at a cost that is now approximately $4 million per month. We are prepared to go forward with our proposed water mitigation program and request that staff come to next week's workshop prepared to reach agreement at that time on the specific details of the proposed mitigation plan so that it can be presented to the Westlands board at its August meeting and so that the FSA will not be further delayed.

Very truly yours,

Gary R. Chandler
President
Panoche Energy Center, LLC

Attachments

Cc: Eileen Allen
Roger Johnson
Richard Anderson
Service List

MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING (the "Memorandum") is entered into as of August __, 2007 by and between Westlands Water District ("Westlands") and Panoche Energy Center, LLC, a Delaware limited liability company ("PEC").

RECITALS

A. Westlands is a purveyor of water from the State Water Project to farmers in Central California and offers an Expanded Irrigation System Improvement Program (EISIP) which provides low interest loans to water users and landowners for the lease-purchase of irrigation system equipment. The EISIP allows for the design of irrigation systems and purchase of portable aluminum irrigation pipe, micro-irrigation, linear move, center pivots, and tail-water reuse systems.

B. Panoche has entered into a power purchase agreement with Pacific Gas & Electric Company for delivery of capacity and energy of up to 400MW up to 5000 hours per year for a 20 year period beginning in August 2009.

C. Panoche is in the process of permitting the 400MW peaking facility through the California Energy Commission with final approval expected in late 2007 or early 2008 and financial closing in early 2008.

D. The Panoche project will be constructed on 12.8 acres of land adjacent to the PG&E Panoche substation located in west Fresno County approximately 2 miles east of I-5 on West Panoche Road.

E. As an enhancement to its proposed water usage and discharge plan, Panoche proposes to make a contribution to Westlands for water conservation.

The following are the parties understanding with respect to the proposed contribution from Panoche to Westlands.

1. Contribution to Westlands. Panoche will make a one-time contribution to Westlands in the amount of $500,000 (the "Contribution") to be used at Westlands discretion for water conservation programs as generally described above in Recital A and under its sponsorship. The Contribution is contingent on final licensing of Panoche by the California Energy Commission and financial closing. The Contribution will be made by check or wire transfer upon such final approval of licensing of Panoche by the California Energy Commission and financial closing.

2. Conservation Amount. Panoche and Westlands acknowledge that the water conservation estimate of 209 acre feet per year for the Contribution is based on water use savings predicted by Westlands from its farmer loan program with the loans repaid every four years and the payments then used for new loans. This has a compounding affect on water savings over time. The estimated water use savings is

209 acre feet per year compounding every four years. Westlands estimates that the average life of installed conservations systems is approximately 8 years or greater.

3. Reporting Requirements. Westlands will provide reasonable data and information regarding use of Contribution and estimated water use savings as may be requested from time to time by Panoche and the California Energy Commission.

4. Other Conditions. The Contribution will not be refunded or returned to Panoche. There are no other conditions associated with the proposed agreement.

Whereupon the parties have executed this Memorandum of Understanding as of August __, 2007:

Westlands Water District

By:_____
Name:_____

Title:_____

Panoche Energy Center, LLC, a Delaware limited liability company

By:_____
Name:_____
Title:_____

209 AF / Year, $500K Contribution Water Savings

Year (Life of PEC Project)	Annual Water Use by PEC (AF/Y)	Annual H20 Savings with Improved Irrigation System (AF/Y)
1	1135	209
2	1135	209
3	1135	209
4	1135	209
5	1135	418
6	1135	418
7	1135	418
8	1135	418
9	1135	627
10	1135	627
11	1135	627
12	1135	627
13	1135	836
14	1135	836
15	1135	836
16	1135	836
17	1135	1045
18	1135	1045
19	1135	1045
20	1135	1045
21		1254
21.5		627
22		1254
23		1254
24		1254
25		1463
26		1463
27		1463
28		1463
29		1672
30		1672
TOTAL PEC Water Use (AF)	**22700**	
TOTAL Water Savings After 21.5 Years (AF)		**13794**
TOTAL Water Savings After 30 Years (AF)		**27379**
TOTAL Additional H20 Savings Exceeding PEC Water Use After 30 Years (AF)		**4679**

Assumptions

1.) Assumed Furrow Irrigation Efficiency = 0.75
2.) Assumed Drip/Micro Irrigation Efficiency = 0.82
3.) Average Crop Evapotranspiration = 3 feet/Yr.
4.) Water Savings = 0.34 feet
5.) Acres Per System = 160 Acres
6.) Amount Loaned/System = $130,000
7.) Repayment Period = 4 Years

Based on assumptions listed above,
Yield = $500,000 / $130,000 x 160 acres x 0.34 feet
Yield = 209 AF/ year

Source: Russ Freeman, Supervisor of Resources, Westlands Water District, Fresno, CA. June 2007

Conclusion

Assuming a water savings of 209 AF / year, after 28 years the water savings would be equivalent to the water use by the PEC based on a contribution of $500,000 to the Irrigation System Improvement Program. After 21.5 years, total water savings would be 13,794 AF.

Additional water savings in excess PEC water use.

Panoche Water Mitigation Plan

Year (Life of PEC Project)	Average Annual Water Use Based on 5000 Hours of Operation (AF/Y)	Cumlative Water Usage (AF/Y)	Annual Water Savings From Mitigation Plan (AF/Y)	Cumlative Water Savings (AF/Y)
Construction			314	314
Construction			627	941
1	1,135	1,135	627	1,568
2	1,135	2,270	627	2,195
3	1,135	3,405	941	3,135
4	1,135	4,540	1,254	4,389
5	1,135	5,675	1,254	5,643
6	1,135	6,810	1,254	6,897
7	1,135	7,945	1,254	8,151
8	1,135	9,080	1,254	9,405
9	1,135	10,215	1,254	10,659
10	1,135	11,350	1,254	11,913
11	1,135	12,485	1,254	13,167
12	1,135	13,620	1,254	14,421
13	1,135	14,755	1,254	15,675
14	1,135	15,890	1,254	16,929
15	1,135	17,025	1,254	18,183
16	1,135	18,160	1,254	19,437
17	1,135	19,295	1,254	20,691
18	1,135	20,430	1,254	21,945
19	1,135	21,565	1,254	23,199
20	1,135	22,700	1,254	24,453
21			1,254	25,707
22			1,254	26,961
23			1,254	28,215
24			1,254	29,469
25			1,254	30,723
26			1,254	31,977
27			1,254	33,231
28			1,254	34,485
29			1,254	35,739
30			1,254	36,993

Assumptions
1) Assumed Furrow Irrigation Efficiency = 0.75
2) Assumed Drip/Micro Irrigation Efficiency = 0.82
3) Average Annual Crop Evapotranspiration = 3.0 feet/Ac
4) Water Savings = 0.34 feet
5) Acres Per System = 160 Acres
6) Amount Loaned/System = $130,000
7) Repayment period = 4 Years
8) Average system life = 8 Years

Based on assumptions listed above,
Yield = $500,000 / $130,000 x 160 acres x 0.34 feet
Yield = 209 AF/year * 3 = 627 AF/year (see Notes below)

Source: Russ Freeman, Supervisor of Resources, Westlands Water District, Fresno, CA. June 2007

Notes:
1) Value of Panoche water is discounted by two-thirds due to three times higher TDS concentration
2) Expected water usage will be considerably lower due to operating less than 5000 hours per year
3) Value for mitigation contribution will continue in perpetuity